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Forestry in Queensland

by

HENRY A. TARDENT.

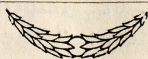


South Queensland Kauri (*Agathis robusta*).

Issued by

THE GOVERNMENT INTELLIGENCE and TOURIST BUREAU,
Edward & Ann Sts.,
BRISBANE.

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Trees are necessary to the existence of man. If there had not first been trees and other forms of vegetable life there would have been no mankind and no civilisation whatever.

Trees not only supply the timber for our manifold requirements, but have, in addition, a powerful beneficial influence on the salubrity of the climate, as their foliage exhales the oxygen required by man and absorbs the carbonic acid gas issuing from our lungs. They further promote, attract, and regulate the rainfall of a given country, and carefully husband the moisture in the soil.

With the disappearance of forests the climate becomes gradually drier, and the soil more and more sterile; springs and rivulets dry up and disappear altogether. Long periods of drought are followed by torrential rains, which wash away the fertile soil, leaving behind only the denuded rocks and hard clay.

Many countries, once fertile and thickly populated, are now—for want of the destroyed forests—turned into sterile deserts, as are, for instance, parts of the coast of Dalmatia, of Madeira, of the Caucasus, and of the Steppes of Transcaspia and Central Asia.

Unfortunately, the advance of civilisation has so enormously increased the consumption of timber, and so little is yet being done towards systematic reafforestation, that the world at large is threatened in a no distant future with a timber famine.

And our bonny Australia is no exception to that general rule. In its pristine state the Australian continent carried a fair proportion of forests, but with the advent of white settlement has, unfortunately, coincided a reckless destruction of our forests without any attempt being made at reafforestation. We had here in our sunny Queensland some scandalous instances of such criminal destruction of most valuable timber resources. I have seen with my own eyes on the Atherton Tableland millions of superficial feet of the finest timbers in the world, such as, for instance, our unique red cedar, wantonly destroyed and rotting on the ground.

At and about Coolabunia, in the South Burnett, thousands of acres of beautiful pine scrub were alienated before the railway lines were sufficiently near to allow of that beautiful pine—and some fine hardwoods, too—being utilised. And when a selector had destroyed a few hundred pounds worth of superb pine, the Crown Lands Ranger would come and inspect and credit the

selector with £2 to £2 10s. of "improvements" per acre. As I one day told those selectors: "They would have been more usefully and more intelligently employed at burning heaps of £5 notes."

As far back as fifty years ago our Acclimatisation Society sounded a note of warning. Now and again a member of Parliament would protest against such senseless waste of our timber resources. But these were all "voces clamantes in deserto." Timid attempts were made at creating an embryonic Forest Service, but no efforts were made to systematise and co-ordinate its various activities, and no policy of reafforestation was elaborated and adopted.

Fortunately for the present and future economic welfare of Queensland, the present Government became at last aware of the necessity of a better care and husbandry of our timber resources. It formulated a rational forestry policy and created an up-to-date Forest Service. At the Australian Forestry Conference, held in Brisbane in 1922, the then Minister for Public Lands, Mr. J. H. Coyne (now a judge of the Land Court), explained his views as follows:—

"I believe that the State forests of Queensland should carry a permanent population, employed at producing crops of timber for the use of the people. I believe that the State forests should be regarded and treated as State enterprises; that they should not be divided among the people settled upon them, as in the case of agricultural farms; and should not be handed to private concessionaries to exploit, as has been done too often in the past; but that the State Forest Service should manage them with its own employed labour as huge State timber farms, producing long-term crops, and serving them up to the people in the most suitable form for use."

The present Minister for Public Lands, Mr. Wm. McCormack, also shares those views of his predecessor in office, and is equally enthusiastic and sanguine about the present achievements and the future potentialities of the newly-created Queensland Forest Service.

To carry out those views which are in keeping with the general policy of the present occupants of the Treasury benches, Mr. Coyne was particularly lucky in securing for the position of Director of Forests Mr. E. H. F. Swain, a young Australian native, brimful with enthusiasm, and possessed of conspicuous organising and administrative ability.

The new Director, who had made a thorough study of the Forestry services—not only of the Australian States but also of the world, some of which he had studied on the spot—set to work in earnest to fulfil the big and difficult task allotted to him.

The whole of the State forests were first grouped into suitable working plan areas, conveniently fitted to the railway systems and markets which serve them. These areas were subdivided into working circles of Eucalypts, Araucarias, and Cabinet woods; and these again into valley logging areas; and these again into average 100-acre compartments, which is the unit adopted for forest operation. The annual cut is regulated at about one-twentieth (in the case of pines) of the mature stand.

The output of the operation is delivered to the nearest railway station, and thence consigned to those buyers who have purchased them at the quarterly log auctions held by the Forest Service at the main centres of population.

This part of the Forest Service is managed by a strong Harvesting and Marketing Section, which also operates six country sawmills and a huge city timber-yard with combined sales during 1923-24 of £166,000, of which the latter returned £138,000. This section controls all the timber hewers, bullock and team drivers, &c. It is not only a contractor to the Queensland Railway and other public Departments for all their timber requirements, but is also attending to the export of timber, having, inter alia, fulfilled an order for 44,000 railway sleepers to New Zealand.

The Forest Service is a revenue-producing branch of the public administration, it having already contributed £1,706,000 to the consolidated revenue, apart from sawmill's receipts. There is a surplus of revenue over expenditure of £962,000.

The ambition of this new and live Forest Service is to free Queensland—and eventually Australia—from the tribute they are now paying to foreign countries for imported timber. With that end in view, it has established a technological section, entrusted with the task of studying, describing, and classifying our Queensland timbers from both the scientific and the commercial aspects. That technological section has established a permanent showroom in Brisbane, where buyers and others interested can see at a glance the respective merits of our different timbers and the various uses to which they can be put. Admirable displays are being made every year at the Brisbane Exhibition, at the exhibitions of the Southern capital cities, and also at Wembley, where they invariably elicit the unstinted admiration and praise of the visitors.

To thoroughly understand the great scientific and economic value of the work of this technological section, it should be recollected that Queensland possesses over 400 species of indigenous timbers entirely unknown to other countries. Of these only a very few are so far being utilised, while hundreds of other species, which would in other countries be highly valued as industrial timbers, are here still neglected and wasted. This

select minority includes the Red Cedar (*Cedrela australis*), the gigantic Kauri Pine (*Agathis robusta*), the White Teak (Beech) (*Gmelina Leichhardtii*), the Silkwood (*Flindersia Brayleyana* and *F. Mazlini*), the Hoop and the Bunya Pines (*Araucaria Cunninghamii* and *A. Bidwilli*), and among the hardwoods the Ironbark (*Eucalyptus paniculata* and *E. crebra*), the Spotted Gum (*E. maculata*), the Tallowwood, Mahogany, and a few others.

As to the æsthetic beauty and commercial value of our Queensland forests, they are described as follows by our enthusiastic Director of Forests in an article recently written—

“ The majesty of the conifer-sprigged mountains of Europe or America in the time of snow cannot be gainsaid, but there is tropic enchantment to be found in the shade of the tree lands of the mystical Antipodes. These forests of the sun cover a treasury of previous woods, and, there are none to be more marvelled at than the timbers of Queensland. The incense-investing Sandalwood, the amazing Ebony, the blood-red Poon, and the rich Mahogany Cedar are all here, fugitive from Asia. But Queensland has others that Asia has not. One of the most glorious woods in the world is the Silkwood (*Flindersia Brayleyana* and *F. Mazlini*), with its rose-pearl sheen and its beautiful water wave, fit for a king's drawing-room, capable of bearing him through the air as the blades of an aeroplane propeller, or of providing him with fine music from the body of a violin. The Medang Walnut (*Endiandra Palmerstoni*) is a harder Circassian of royal figure; the Black Bean (*Castanospermum australe*) is a magnificent black wood of the true Rosewood group; the Silky Oaks (*Cardwellia* and *Embothrium* species) are spangled cabinet woods whose native gaiety is subdued to handsomeness in all the offices of Brisbane by fuming and staining; the Pine woods are clear white, even toned, even grained timbers of great purity and value for furniture and joinery work and for boat-building; the Rose Mahoganies (*Dysoxylon*) are deep-coloured, aromatic woods, of beautiful finish and high durability; White Teak (Beech) (*Gmelina Leichhardtii*) is one of the finest carving woods extant; the Quandongs and Carrobeans (*Elæocarpus* species) of the mild-pale, open-grained turnery classes, &c., &c.”

The description of those unique Queensland timbers occupies several pages, a special stress being made on the great economic value of the aromatic, white-ant resistant, velvet-sheened Cypress Pines (*Callitris* species), and on the Eucalyptian and other Myrtaceous hardwoods, such as the Ironbarks, the Blackbutts,

the Red and Yellow Messmates, the Tallowwoods, the Bloodwoods, &c., all woods of strength and weight for railway and other construction work, most of them possessing a durability exceeding that of British Oak.

In the same article Mr. Swain remarks that, in spite of that great diversity of valuable timbers, the commercial forests of Queensland occupy only a very small proportion of our huge State—about 5 per cent.—while the reserved State forests (about 6,000,000 acres) represents only about 1 per cent. of our total territorial area, mostly located on the eastern watershed and along the Dividing Range, the forest growth diminishing, like the rainfall, as the distance from the coast increases.

But to revert to the organisation of our Queensland Forest Service, the most important part of its activity is, perhaps, entrusted to the so-called "Sylvicultural Branch," the work of which consists in preparing the working plan, in surveying existing and prospective forests, and in attending to the important work of reafforestation.

Its task is rendered more difficult from the fact that, on account of totally different climatic conditions, the books on Forestry published in other countries are only of little use here when not altogether unsuitable. Some particular features of the Queensland climate are (1) a copious summer rainfall; (2) winter dryness; and (3) a high rate of evaporation from the surface in both summer and winter.

To adapt themselves to those special peculiarities of our climate, the indigenous species have—in the course of æons—evolved special habits, the principal being, perhaps, quickly-germinating seeds which emit first long tap-roots, penetrating deep into the subsoil as a provision against the oncoming periods of winter dry weather.

The peculiarity of our indigenous species proved at first a serious drawback and stumbling block to the successful transplanting of young seedlings until a simple, but very effective, device was resorted to for overcoming the difficulty. The young seedlings are dibbled into 6 inch by 1½ inch tin tubes. After they establish themselves they are released from those tubes into their permanent homes by a simple latch device which prevents the tins from springing open until so desired. By those ingenious means failures have been reduced from 50 per cent. down to 10 per cent. and less, and the nursery costs have also undergone a considerable reduction.

As showing the good progress which is now being made towards systematic reafforestation, it is gratifying to learn that there is now in various parts of the State from 12 to 15 acres used as sylvicultural nurseries for the regular production of tree seedlings.

A fine feature of our Forestry system is that the whole of our timber exploitation is eminently a white man's industry. Mr. Swain is rightly proud of the fine staff which he has succeeded in recruiting for the State Forest Service. It consists, including the field, mill, and marketing hands, of over 400 officers, embracing a large proportion of the physical and intellectual elite of our small but singularly active community. It is 98 per cent. Australian, with a great preponderance of returned diggers. All those men are working under arbitration awards, with a fixed basic wage, a 44-hour week, and a yearly holiday on full pay.

In view of the great progress accomplished in so short a time by our Forest Service, all will agree with Mr. Owen Jones, B.A., the chairman of the Forestry Commission of Victoria, when he said at the Brisbane Forestry Conference—

“I listened with great interest to the astonishing progress Forestry has made in Queensland, and I share Mr. Ritchie's opinion that in a near future we shall all have to take our hats off to Queensland.”

But great as are the actual achievements of Forestry in Queensland, they are only the forerunners of greater things to follow. A Provisional Forestry Board has now been constituted by the Queensland Government, and at its head as chairman has been placed the former Director. Mr. A. A. Staines, formerly Chief Public Service Inspector and previously Police Magistrate, has been appointed as one of the members of the new Board, and with him has been associated as third member Mr. C. R. Paterson, formerly Forest Engineer. With such enthusiastic and progressive men at the head of affairs, we can expect in a near future the passing of a thoroughly modern and up-to-date Forestry Bill, organising the Forest Service as an independent Department under the control and management of a responsible Commissioner, empowered to reinvest in reafforestation a considerable percentage of the yearly income derived from the exploitation of existing forests.

The question of educating and forming our future Foresters has also to be faced. Up to now those joining the service—mostly practical bushmen, timber-getters, and others practically acquainted with some branch of the timber industry—are encouraged to study the science of Forestry and to qualify themselves for preferment and promotion. And most of those young Australian natives are naturally so well gifted that they learn the science of Forestry almost as rapidly as they used to learn the art of warfare during their brilliant campaigns in France and Palestine.

Some specially gifted and qualified young Queenslanders—as was the case with the Forest Engineer, C. R. Paterson, B.E. (Q.), and the working plans officer, V. Grenning, of Rhodes

Scholarship fame—were sent to foreign countries to study on the spot the various aspects of forest management and exploitation. But those means are at best only initiatory or rather complementary measures, and the problem of forming qualified scientific Foresters has to be faced at a no distant future.

Mr. Swain, who has made a careful study of every aspect of the problem, has formulated his views of the subject in a comprehensive and very informative paper, which he read before the Brisbane Forestry Conference, where it elicited a very animated and interesting discussion.

Mr. Swain does not favour the establishment of only one Federal School of Forestry for the whole of the Commonwealth. On account of the great diversity of climatic conditions obtaining in Australasia, he thinks that it would be better to have several, or at the very least two, distinct schools—one in the Southern States dealing with Forestry for a temperate climate, and one in Queensland preparing Foresters suited to the special climatic and other conditions obtaining in tropical and subtropical regions.

“My conception,” he says, *inter alia*, “of an ideal Forestry School is one grafted on a Forest Service on the one hand, and to a University on the other. I would use the University to provide the mental pabulum in science and engineering subjects, and I would call upon the Forestry research experts, Forest Service specialists, and administrative officers, supplemented by one or two standing lecturers, to provide the second; and, finally, I would attach its aspirant Foresters to Forest survey camps, Forest stations, and Forest offices to complete their training.”

It may be remarked, by the way, that it is precisely a similar judicious blending of practical work in the field and in the laboratory with theoretical knowledge which has made the world-wide reputation of the Forestry School attached to the Swiss Federal Polytechnicum in Zurich.

We have already some of the elements required to build up a much-needed school of modern Forestry. Let us now crown this scientific institution by the creation of a Chair of Forestry at our young University and the establishment of a Research Laboratory. Few countries in the world, if any, offer such a vast and fruitful field for scientific observations and investigations as does Queensland with its varied and original fauna and flora. What a fine opportunity is thus offering to some of our wealthy Queenslanders to perpetuate their memory and to show their gratitude to the land where they have prospered and accumulated wealth. All they have to do is to bequeath, either individually or collectively, a sum of money sufficiently large to

establish a well-equipped Forestry Laboratory and a Chair of Forestry in connection with our young and still incomplete Queensland University.

As one who had a good deal of experience in educational matters, and was one of the initiators of the movement for the teaching of the elements of agriculture and horticulture in our public schools, may I be permitted to suggest that our schools should be utilised for popularising Forestry among the growing generations of young Australian natives. School teachers are already so overburdened with a great variety of subjects that it would hardly be fair to lay another upon their shoulders, but if the Forest Service were to appoint a few itinerant instructors in silviculture, say, one each for the three great divisions of the State, they could give lectures and establish in school experiment plots little nurseries of trees suitable to the respective districts. Under the direction of those instructors, both teachers and pupils would gladly attend to the young tree seedlings, which could then be distributed among the residents of the district. Thus Forestry knowledge and reafforestation habits would gradually gain ground among our people.

In certain provinces of France it is customary to plant at the birth of a child an hectare of land with grape vine and asparagus, the returns of which are considered sufficient to rear and educate the child and to provide a competency for his old age.

Why not adopt a similar custom here in Australia by planting at the birth of a child a few acres of forest. We would certainly do so if we knew what a safe and sure and profitable investment is afforestation. How many Australians are aware that an acre of, say, Kauri Pine, planted at a cost of from £5 to £6 per acre, will bring in in forty years an income of from £200 to £250, which pans out at the rate of about 8 per cent. compound interest on the initial outlay. Truly, there is a vast field for usefulness and profit for both individual citizens and the community at large open before our young Queensland Forest Service.

December, 1924.

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